

**HERITAGE IMPACT ASSESSMENT
FOR THE PROPOSED HARBOUR TOWN RESIDENTIAL ESTATE
DEVELOPMENT, VAAL MARINA, MIDVAAL,
GAUTENG**

For:

SYNERGISTICS ENVIRONMENTAL SERVICES
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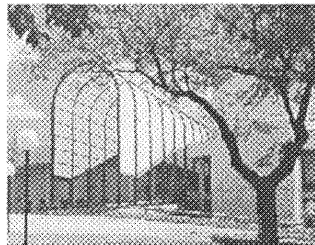
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SUMMARY

Heritage impact assessment for the proposed Harbour Town Residential Estate development, Vaal Marina, Midvaal, Gauteng

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the boundaries of the area in which it is proposed to develop the Harbour Town residential estate.

Based on what was found and its evaluation, it is recommended that the proposed development can continue in the area, on condition of acceptance of the following recommendations:

- That the identified features be documented and investigated by an archaeologist, after obtaining a permit from SAHRA.
- If archaeological sites are exposed during construction work, it should immediately be reported to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of the finds can be made.

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HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED HARBOUR TOWN RESIDENTIAL ESTATE DEVELOPMENT, VAAL MARINA, MIDVAAL, GAUTENG

1. THE SURVEY

The National Cultural History Museum was contracted by Synergistics Environmental Services to conduct a survey an area in which it is proposed to develop the Harbour Town Residential Estate in the vicinity of the Vaal Marina, Gauteng. The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural importance found within the boundaries of the area that is to be impacted by the developed.

2. TERMS OF REFERENCE

The scope of work consisted of conducting a Phase 1 archaeological survey of the site in accordance with the requirements of Section 38(3) of the National Heritage Resources Act (Act 25 of 1999).

This include:

- Conducting a desk-top investigation of the area
- A visit to the proposed development site

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development areas;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

3. DEFINITIONS AND ASSUMPTIONS

The following aspects have a direct bearing on the survey and the resulting report:

- **Cultural resources** are all nonphysical and physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artefacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.
- The **significance** of the sites and artefacts are determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

- Sites regarded as having low significance have already been recorded in full and require no further mitigation. Sites with medium to high significance require further mitigation.
- The latitude and longitude of archaeological sites are to be treated as sensitive information by the developer and should not be disclosed to members of the public.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are mainly dealt within two acts. These are the South Africa Heritage Resources Act (Act 25 of 1999) and the Environmental Conservation Act (Act 73 of 1989).

4.1 South African Heritage Resources Act

Archaeology, palaeontology and meteorites

In terms of Section 35(4) of this act, no person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or material or any meteorite; bring onto, or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

Structures:

Section 34(1) of this act states that no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

“Structure” means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith;

“Alter” means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or other decoration or any other means.

4.2 Environmental Conservation Act

This act states that a survey and an evaluation of cultural resources should be undertaken in areas where development, which will change the face of the environment, is to be made. The impact of the development on the cultural resources should also be determined and proposals to mitigate this impact are to be formulated.

5. METHODOLOGY

5.1 Preliminary investigation

5.1.1 Survey of the literature

A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various anthropological, archaeological and historical sources were consulted - see the list of references below.

5.1.2 Data bases

The *Archaeological Data Recording Centre (ADRC)*, housed at the National Cultural History Museum, Pretoria, was consulted. The *Environmental Potential Atlas* was also consulted.

5.1.3 Other sources

The topocadastral and other maps were also studied - see the list of references below.

5.2 Field survey

The field survey was done according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. The area that had to be investigated was identified by Synergistics Environmental Services by means of maps. The area was investigated by walking across it in a number of transects. Special attention was given to topographical occurrences such as trenches, holes, outcrops and clusters of trees were investigated.

5.3 Documentation

All sites, objects and structures that are identified are documented according to the general minimum standards accepted by the archaeological profession. Coordinates of individual localities are determined by means of the *Global Positioning System (GPS)*¹ and plotted on a map. This information is added to the description in order to facilitate the identification of each locality.

Map datum used: Hartebeeshoek 94 (WGS84).

6. DESCRIPTION OF THE AREA

The area that was surveyed is an irregular shaped piece of land, located on the farm Koppiesfontein 478IR, in the Midvaal district of Gauteng, on the shores of the Vaal Dam in the vicinity of the Vaal Marina (Fig. 1).

The geology of the area is made up of lava, with some dolomite intrusions. The original vegetation is classified as Moist Cool Highveld Grassland, which changes to Rocky Highveld Grassland just to the west of the study area. The topography of the area can be described as small hills, changing to mountains in the west. The most prominent feature is the Vaal River, in this area, now expanded a lot as part of the Vaal Dam.

The south western section of the study area has been impacted on by development of uncertain origin. A dam was built in a small tributary to the Vaal River and, recently, some new roads were made on the site as part of the proposed development.

¹ According to the manufacturer a certain deviation may be expected for each reading. Care was, however, taken to obtain as accurate a reading as possible, and then to correlate it with reference to the physical environment before plotting it on the map.



Fig. 1. Location of the study area

7. DISCUSSION

A number of features were identified during the survey and their position is presented in Fig. 2, as well as Appendix 2.

Large scale development has taken place in the larger area in the past and it is not known what sites have been destroyed as a result. It is therefore imperative that the identified structure be recorded and that any similar development should be preceded by a heritage impact assessment.

7.1 Stone Age

A few flakes and a core, all dating to the Late stone Age, were noticed. However, it was all surface material and have little significance. A number of stone circles were identified that are similar to what are found on open Late Stone Age sites and should therefore be recorded before development takes place.

7.2 Iron Age

A number of structures were identified that might date to the Late Iron Age. However, as the grass cover was quite dense, it is difficult to determine its exact origin at present.

7.3 Historic period

At least three structures that can be identified as “farm labourer homesteads” were identified. These are probably older than 60 years and should therefore be documented and studied before development takes place.

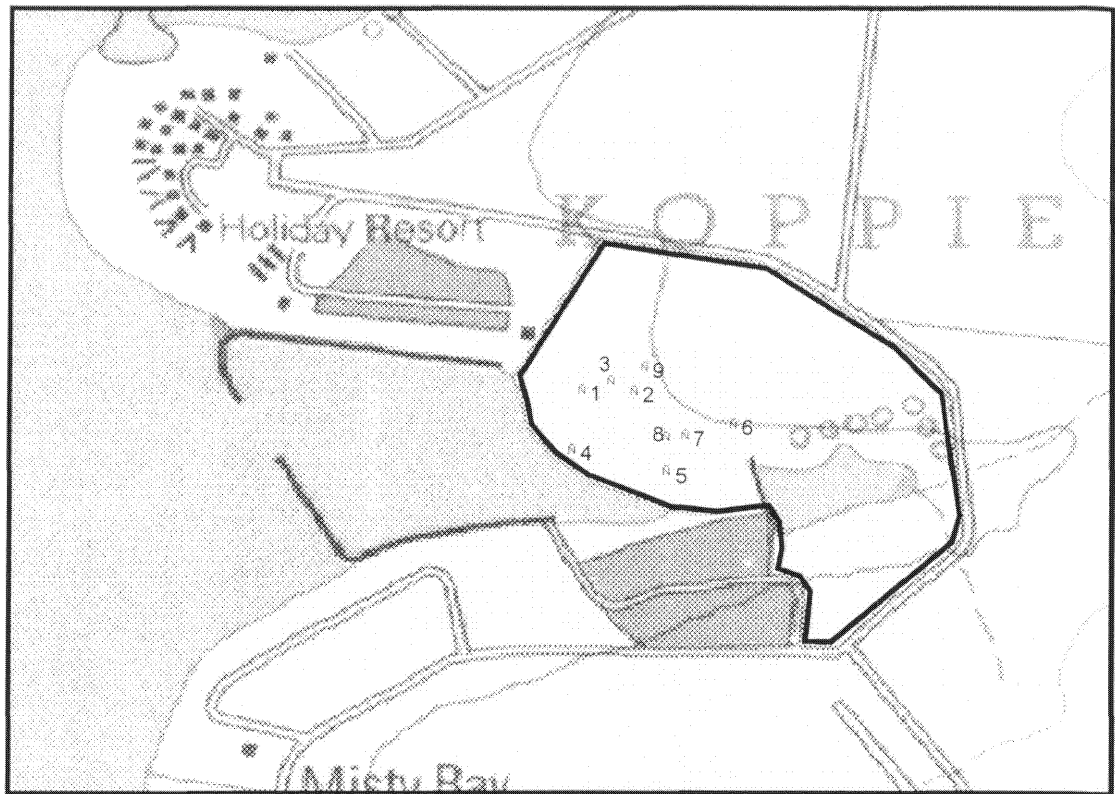


Fig. 2. Location of the identified sites.

8. IDENTIFICATION OF RISK SOURCES

The following project actions may impact negatively on archaeological sites and other sites of cultural importance. The actions are most likely to occur during the construction phase of the proposed project.

- Construction activities will damaged the identified features.
- Construction activites may expose unknown features.
- Curious workers might remove exposed material.
- The occupants of the new houses might remove object of destroy the identified features.

9. RECOMMENDATIONS

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the boundaries of the area in which it is proposed to develop the Harbour Town residential estate.

Based on what was found and its evaluation, it is recommended that the proposed development can continue in the area, on condition of acceptance of the following recommendations:

- That the identified features be documented and investigated by an archaeologist, after obtaining a permit from SAHRA.
- If archaeological sites are exposed during construction work, it should immediately be reported to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of the finds can be made.

10. REFERENCES

10.1 Data bases

Archaeological Data Recording Centre, National Cultural History Museum, Pretoria.

Environmental Potential Atlas, Department of Environmental Affairs and Tourism.

10.2 Literature

Acocks, J.P.H. 1975. *Veld Types of South Africa*. Memoirs of the Botanical Survey of South Africa, No. 40. Pretoria: Botanical Research Institute.

Holm, S.E. 1966. *Bibliography of South African Pre- and Protohistoric archaeology*. Pretoria: J.L. van Schaik.

Mason, R.J. 1962. *Prehistory of the Transvaal*. Johannesburg: Witwatersrand University Press.

Richardson, D. 2001. *Historic sites of South Africa*. Cape Town: Struik Publishers.

Van Riet Lowe, C. n.d. *The distribution of Prehistoric rock engravings and paintings in South Africa*. Archaeological Survey, Archaeological Series No. 7.

Van Warmelo, N.J. 1935. *A Preliminary survey of the Bantu Tribes of South Africa*. Ethnological Publications No. 5. Pretoria: Government Printer.

Van Warmelo, N.J. 1977. *Anthropology of Southern Africa in Periodicals to 1950*. Pretoria: Government Printer.

10.3 Maps

1: 50 000 Topocadastral maps – 2628CC

11. PROJECT TEAM

J van Schalkwyk

APPENDIX 1: STANDARDIZED SET OF CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON CULTURAL RESOURCES

Significance of impact:

- low where the impact will not have an influence on or require to be significantly accommodated in the project design
- medium where the impact could have an influence which will require modification of the project design or alternative mitigation
- high where it would have a “no-go” implication on the project regardless of any mitigation

Certainty of prediction:

- Definite: More than 90% sure of a particular fact. Substantial supportive data to verify assessment
- Probable: More than 70% sure of a particular fact, or of the likelihood of that impact occurring
- Possible: Only more than 40% sure of a particular fact, or of the likelihood of an impact occurring
- Unsure: Less than 40% sure of a particular fact, or the likelihood of an impact occurring

Recommended management action:

For each impact, the recommended practically attainable mitigation actions which would result in a measurable reduction of the impact, must be identified. This is expressed according to the following:

- 1 = no further investigation/action necessary
- 2 = controlled sampling and/or mapping of the site necessary
- 3 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary
- 4 = preserve site at all costs

Legal requirements:

Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project, if mitigation is necessary.

APPENDIX 2: SURVEY RESULTS²

[Previous site numbers relate to other known sites on a particular ¼ degree sheet already documented in the ADRC, and does not necessarily refer to sites occurring on or close to the specific area of development.]

Map datum used: Hartebeeshoek 94 (WGS84).

1. Site number: 2628CC1

Location: Koppiesfontein 478IR: S 26.87113; E 28.19841

Description: Stone walling and terracing, probably Iron Age in dating

Discussion: Probably dates to early historic times – might link to the following structure. In all probability it is older than 60 years and should be documented as required by the Heritage Act.

Significance of impact: High

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary

Legal requirements: SAHRA permit

2. Site number: 2628CC2

Location: Koppiesfontein 478IR: S 26.87115; E 28.19954

Description: Farm labourer homestead

Discussion: This feature probably links to the previous one. It is probably older than 60 years and should be documented, as required by the Heritage Act.

Significance of impact: High

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary

Legal requirements: SAHRA permit

3. Site number: 2628CC3

Location: Koppiesfontein 478IR: S 26.87094; E 38.19902

Description: Rectangular stone walled structure, probably a cattle kraal.

Discussion: As with the other structures in the area, it should be documented as it might be linked with them.

Significance of impact: High

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary

Legal requirements: SAHRA permit

4. Site number: 2628CC4

Location: Koppiesfontein 478IR: S 26.87239; E 28.19818

Description: Circular stone wall. From the size, location and context, this feature might date to the Late Stone Age.

Discussion: This is probably one of many such features that occurred in the larger area, but, which due to development, have mostly disappeared.

Significance of impact: High

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary

Legal requirements: SAHRA permit

²² See Appendix 1 for an explanation of the conventions used in assessing the cultural remains.

5. Site number: 2628CC5Location: Koppiesfontein 478IR: S 26.87286; E 28.20022Description: Circular stone wall and terracing.Discussion: Probably dates to the Late Iron Age/Early Historic periodSignificance of impact: HighRecommended management action: 2 = controlled sampling and/or mapping of the site necessaryLegal requirements: SAHRA permit6. Site number: 2628CC6Location: Koppiesfontein 478IR: S 26.87185; E 28.20163Description: Circular stone wallDiscussion: Probably dates to the Late Iron Age/Early Historic periodSignificance of impact: HighRecommended management action: 2 = controlled sampling and/or mapping of the site necessaryLegal requirements: SAHRA permit7. Site number: 2628CC7Location: Koppiesfontein 478IR: S 26.87210; E 28.20062Description: Remains of a farm labourer homesteadDiscussion: It is probably older than 60 years and should be documented, as required by the Heritage Act.Significance of impact: HighRecommended management action: 2 = controlled sampling and/or mapping of the site necessaryLegal requirements: SAHRA permit8. Site number: 2628CC8Location: Koppiesfontein 478IR: S 26.87212; E 28.20022Description: Remains of a farm labourer homesteadDiscussion: It is probably older than 60 years and should be documented, as required by the Heritage Act.Significance of impact: HighRecommended management action: 2 = controlled sampling and/or mapping of the site necessaryLegal requirements: SAHRA permit9. Site number: 2628CC9Location: Koppiesfontein 478IR: S 26.87064; E 28.19976Description: Circular stone wallDiscussion: Probably dates to the Late Iron Age/Early Historic periodSignificance of impact: HighRecommended management action: 2 = controlled sampling and/or mapping of the site necessaryLegal requirements: SAHRA permit

APPENDIX 3: GLOSSARY AND ABBREVIATIONS

This section is included to give the reader some necessary background. It must be kept in mind, however, that these dates are all relative and serve only to give a very broad framework for interpretation.

STONE AGE

Early Stone Age (ESA)	2 000 000 - 150 000 Before Present
Middle Stone Age (MSA)	150 000 - 30 000 BP
Late Stone Age (LSA)	30 000 - until c. AD 200

IRON AGE

Early Iron Age (EIA)	AD 200 - AD 1000
Late Iron Age (LIA)	AD 1000 - AD 1830

HISTORICAL PERIOD

Since the arrival of the white settlers - c. AD 1840 in this part of the country

ADRC - Archaeological Data Recording Centre

core - a piece of stone from which flakes were removed to be used or made into tools

PHRA – Provincial Heritage Resources Agency

SAHRA - South African Heritage Resources Agency